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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,532	10/21/2003	Anna Stachowiak	3691-606	9331

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EXAMINER

ASSAF, FAYEZ G

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,532

Applicant(s)

STACHOWIAK ET AL.

Examiner

Fayez G. Assaf

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/21/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, 7, 9, 11, 13 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujii (US 5,583,704).

Claims 1, 4, 5, 8, 10, 11, 13, 16, 17 and 20-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Iacovangelo et al. (US 6,587,263 B1).

Regarding claims 1, 13 and 17, Fujii and Iacovangelo disclose a first surface mirror comprising: a substrate supporting a coating (Fujii, 22 of Fig. 4; Iacovangelo, 802 of Fig. 8), wherein the coating includes at least an Al reflective layer (Fujii, 24 of Fig. 4; Iacovangelo, 806 of Fig. 4), first and second dielectric layers (Fujii, 25 and 26 of Fig. 4; Iacovangelo, 808 and 810 of Fig. 8), and a Cr inclusive layer (Fujii, 23 of Fig. 4; Iacovangelo, 804 of Fig. 8), wherein the Cr inclusive layer is

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located directly under and contacting the reflective layer in order to improve at least durability of the first surface mirror, and wherein the reflective layer reflects incoming light away from the substrate before the incoming light reaches the Cr inclusive layer.

Regarding claims 4, 16 and 25, Iacovangelo discloses the Cr inclusive layer being substantially metallic (line 65 to line 67 of Col. 7).

Regarding claims 5 and 21-24, Iacovangelo discloses the reflective layer comprises Al such that the first surface mirror reflects at least about 80%, 85% or 90% of incoming visible light at about 550 nm (see Fig. 10).

Regarding claim 8, Iacovangelo discloses the first and second dielectric layers being each provided on the substrate over at least the reflective layer, and wherein the second dielectric layer (808 of Fig. 8) being an outermost layer of the first surface mirror, and wherein the second dielectric layer has an index of refraction value "n" greater than an index of refraction value "n" of the first dielectric layer.

Regarding claim 6, 7 and 9, Fujii discloses the Cr inclusive layer comprising an oxide and/or nitride of Cr and the first dielectric layer comprising silicon oxide and the second dielectric layer comprises titanium oxide (line 23 to line 31 of Col. 8).

Regarding claim 10, Iacovangelo discloses the Cr inclusive layer being from about 10 to 100 Å thick (see Fig. 9).

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Regarding claims 11 and 20, Fujii Iacovangelo or discloses the reflective layer inherently reflecting incoming light back toward a viewer before the incoming light reaches the substrate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii.

Fujii discloses the mirror being used in optical devices such as cameras or telescopes. Fujii discloses the claimed invention except for the mirror being located in a projection television apparatus.

However, the manner in which the mirror is intended to be employed does not differentiate the claimed mirror from the prior art mirror satisfying the claimed structural limitations.

It would have been obvious, at the time the invention was made, to a person having ordinary skill in the art to adapt the mirror in a projection television apparatus because high-reflectivity mirrors are desirable in projection television devices.

Ex Parte Masham, 2 USPQ2d 1647 (1987).

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Claims 3 and 12, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iacovangelo et al.

Iacovangelo discloses the claimed invention except for the substrate comprising soda lime silica based glass and the layer 910 of the embodiment shown in Figure 9 being silicon nitride.

However, the selection of well known optical materials does not serve as basis for patentability.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make use of the disclosed optical materials, since it have been held to be within the ordinary skill of worker in the art to select a known material on the basis of its suitability for the intended use. One would have been motivated to use such materials because their durability.

Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fayez G. Assaf whose telephone number is (571) 272-2307. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The

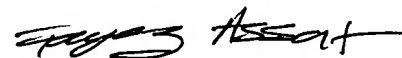
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fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FA

11/19/04



FAYEZ G. ASSAF
PRIMARY EXAMINER